BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:	Group Art Unit: 2189
Wei Ming Hu et al.	Examiner: Tim T. Vo
Serial No.: 09/223,660	
Filed: December 30, 1998	**RECEIVED**
For: METHOD AND SYSTEM FOR DIAGNOSTIC PRESERVATION OF THE STATE OF A COMPUTER SYSTEM	SEP 0 5 2003
	Technology Center 2100

REPLY BRIEF UNDER 37 CFR § 1.193

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

The applicants submit this Reply Brief pursuant to 37 CFR § 1.193 in response to the

Examiner's Answer mailed on July 2, 2003.

1

REMARKS

The Examiner maintains, in the Examiner's Answer mailed on July 2, 2003, that claims 1-72 are unpatentable over U.S. Patent No. 5,485,573 to Tandon (hereinafter "Tandon") in view of U.S. Patent No. 6,195,760 to Chung et al. (hereinafter "Chung") and further in view of U.S. Patent No. 4,164,017 to Randell et al. (hereinafter "Randell").

Claim 1 is representative of the rejected claims. Claim 1 recites "preserving in place the state of a first set of system resources after the failure occurs in the computer system." (emphasis added). The Examiner states in the July 2, 2003 Examiner's Answer:

> 3. "preserving in place the state of a first set of system resources after the failure occurs in the computer system." ((the breadth of this is limitation, a primary computer having resources such as network and I/O resources is running and when there is a failure, the previous state of the primary computer would then save into a particular location of memory (in place) after a failure). Appellant has never defined what the phrase "in place" means in the claims. Claims are given their broadest reasonable interpretation consistent with the specification. It is proper to use the specification to interpret what the applicant mean by a word or phrase recited in the claim. However, it is not proper to read limitations appearing in the specification into the claim when these limitations are not recited in the claim. Therefore, it would not be proper for the examiner to give words of the claim special meaning when no such special meaning has been defined by the applicant in the written description. Furthermore, it would not be proper for the examiner to allow a claim and issue the applicant with an examiner's statement of reasons for allowance setting forth the special definition given to the words of the claim when no such special definition has been defined by the applicant in the written description). Thus, the examiner's interpretation of the claim scope is consistent with the term used.

(July 2, 2003 Examiner's Answer, pgs. 6-7). This is the first time that the Examiner has asserted that he interprets the claim element to mean "a primary computer having resources such as network and I/O resources is running and when there is a failure, the previous state of the primary computer would then save into a particular location of memory (in place) after a failure."

"When examining claims for patentability, <u>claims are interpreted as broadly as is</u> reasonable and <u>consistent with the specification</u>." *In re Thrift*, 63 U.S.P.Q.2d (BNA) 2002, 2006 (Fed. Cir. 2002) (emphasis added). Saving "the previous state of the primary computer . . . into a particular location of memory," as argued by the Examiner, requires copying the state of the primary computer and storing that copy at a memory location. The specification of the subject application, however, specifically discusses this option in the background section as being inadequate, problematic, and costly. *See* pg. 1, l. 16 to pg. 2, l. 21. Further, the specification of the subject application expressly states that the present invention does not require making a copy of the state of a system and storing that copy in memory. *See* pg. 2, l. 22 to pg. 3, l. 5. Thus, the Examiner's interpretation of the claim is <u>inconsistent</u> with the specification.

In addition, the Examiner contends that he interprets the claim element to mean storing "the <u>previous</u> state of the primary computer." (emphasis added). The claim element, however, makes it clear that the state of the system resources that is preserved is the state the system resources were in <u>after</u> the failure occurred and is <u>not</u> the state the system resources were in <u>before</u> the failure occurred, as asserted by the Examiner. Therefore, the Examiner's contention of the claim scope is <u>not</u> consistent with the language used.

Moreover, saving "the previous state of the primary computer . . . into a particular location of memory," as argued by the Examiner, necessitates the use and movement of resources, which could change or modify the state of the resources that are suppose to be preserved. Claim 1, in contrast, recites "preserving <u>in place</u> the state of a first set of system resources after the failure occurs in the computer system." (emphasis added). Merriam-Webster defines "in place" as "in an original position . . . in the same spot without forward or backward movement." *Merriam-Webster Online*, http://www.m-w.com/. For example, freezing or suspending the first set of system resources to

insure that the state of those resources are not modified or changed. Hence, the Examiner's

interpretation of the claim is unreasonable as it completely disregards certain terms in the claim.

The Examiner further states:

10.   Tandon and Chung do not teach preserving in place the state of a first set of system resources after a failure occurs in the computer system. This means a first set of system resources as being a primary computer running database DBMS with computer resources such as network and I/O resources that would preserve its previous state in place after the failure. However, Randell teaches a computer system which performs actions in order to manipulate the states or values of items of information that is a program to be carried out on a computer system is constructed from identifiable operations for error recovery (see column 1 lines 5-50). These citations are equivalent to the present invention that is preserving in place the state of a first set of system resources after the failure occurs in the computer system. Therefore, it would have been obvious to include such teach preserving the state of a computer system after the failure occurs into the system of Tandon and Chung to diagnose and analyze the reason for failure and thereby preventing errors in future. (For more clarification, see below).

11.   Randell teaches a computer program having provision for error recovery is constructed from a number of identifiable operation states after a failure occurs in the computer system. Randell teaches a program that forms a nested set of blocks and it is desired to restore the apparatus to its previous state in place by preserving the state at the beginning of each block. Further, column 1 lines 25-50, Randell describes each beginning of blocks in a program indicates a state of operation in the computer system and to determine whether there is a need to preserve that state of operation. For example, to preserve the previous state in place of operation after a failure, Randell teaches each of a plurality of items information at the beginning of each block wherein the item information change state during such block so that the condition prevailing at the beginning of the block can be restored by having a first memory means for storing the most recent state of each of the item information, second memory means for storing previous states of the item information (see column 1 lines 25-50). This process is saving previous state of the computer in place into a particular location of memory, which discussed above in paragraph number 3.

(July 2, 2003 Examiner's Answer, pgs. 9-10).

Randell discloses:

This invention relates to computer systems and similar devices which perform actions in order to manipulate the states or values of items of information.

A program to be carried out on a computer system is constructed from identifiable operations, each of which constitutes a block and consequently the complete program can be regarded as a set of blocks. Many blocks are themselves constructed from further smaller blocks so that the complete program forms a nested set of blocks. On completion of a block, it is frequently desired to restore the apparatus to state in which it was at the beginning of the block. One way of doing this is to make a separate record in the memory of the computer to the initial states of all items of information in the system. This is extremely wasteful of storage capacity since, in many blocks, only a comparatively small number of such items of information will change.

According to the invention, there is provided data processing apparatus for use with a central processor of a computer system or similar device in processes comprising a set of program blocks, said apparatus being operative to preserve the state taken up by each of a plurality of items of information at the beginning of each block where said items of information change state during such block so that the conditions prevailing at the beginning of the block can be restored, said apparatus comprising first memory means for storing the most recent state of each of said items of information, second memory means for storing previous states of said items of information, means responsive to said second memory means for transferring the existing state of an item of information from said first memory means to said second memory means when the state of said item of information changes and restoring to the first memory means the state of an item of information stored in the second memory means, and means for associating additional information with said items of information to control said transfer and restoration.

In one form of the invention, said means for associating additional information with the items of information comprises further memory means addressable with said first memory means for determining whether there is a need to preserve the state of each item of information in said first memory means if said item of information changes state during the current block.

(Col. 1, ll. 5-51).

Randell, as asserted by the Examiner, only discloses storing the "previous" state of various items of information in the system. Claim 1, in contrast, recites "preserving in place the state of a first set of system resources <u>after the failure</u> occurs in the computer system." (emphasis added). Additionally, claim 1 does <u>not</u> recite "preserving the state of a computer system after the failure

occurs" as contended by the Examiner. Claim 1 recites "preserving <u>in place</u> the state of a first set of system resources after the failure occurs in the computer system." (emphasis added).

Further, as stated by the Examiner, "Randell teaches restor[ing] the apparatus to its previous state . . . at the beginning of each block" after failure occurs. Whereas, claim 1 recites "preserving <u>in place</u> the state of a first set of system resources after the failure occurs in the computer system." (emphasis added). Hence, Randell teaches away from the claim element since it discloses overwriting the most recent state of the items of information in the first memory means with the previous state of the items of information in the second memory means in order to restore the system to the state it was in prior to the error. *See* col. 1, ll. 39-43.

Therefore, even if Randell, Tandon, and Chung were combined, the combination neither teaches nor discloses "preserving in place the state of a first set of system resources after the failure occurs in the computer system" as recited in claim 1. Accordingly, applicants respectfully submit that claim 1 is patentable over Tandon in view of Chung and further in view of Randell.

CONCLUSION

For the above reasons, applicants respectfully submit that rejection of claims 1-72 based on

35 U.S.C. § 103(a) has been overcome. Accordingly, applicants request that the Board of Patent

Appeals and Interferences overrule the Examiner and allow claims 1-72.

Respectfully submitted,

Bingham McCutchen LLP

Dated: _____8-27-03_____   By: _____

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TRANSMITTAL OF REPLY BRIEF UNDER 37 CFR § 1.193

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Sir:

Transmitted herewith for the above-identified application are the following:

1.   Reply Brief Under 37 CFR § 1.193 (7 pages); and

2.   Return Postcard.

CERTIFICATE OF MAILING
(37 C.F.R. §1.8(a))

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as First Class Mail in an envelope addressed to Mail Stop Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Linda Major
Name of Person Mailing Paper

August 27, 2003
Date of Deposit
PA:52116631.1/2021039-7011522001/OID-1998-18-01

Signature of Person Mailing Paper

☐ Applicant(s) petitions for an extension of time under 37 CFR § 1.136 [fees: 37 CFR § 1.17(a)(1)-(5)] for the total number of months checked below:

EXTENSION (months)	FEE FOR SMALL ENTITY		FEE FOR OTHER THAN SMALL ENTITY	
1 month	☐	$55.00	☐	$110.00
2 months	☐	$200.00	☐	$400.00
3 months	☐	$460.00	☐	$920.00
4 months	☐	$720.00	☐	$1,440.00
5 months	☐	$980.00	☐	$1,960.00

☐ An extension for _____ months has already been secured and the fee paid therefor of _____ is deducted from the total fee due for the total months of extension now requested.

☐ Extension fee due with this Request _____.

☒ If an additional extension of time is required, please consider this a petition therefor.

FEES FOR CLAIMS:

☐ Applicant claims small entity status pursuant to 37 CFR 1.27.

The fees for claims (37 CFR § 1.16(b)-(d)) have been calculated as shown below:

Total Claims		-	=	0	x	$18.00	$0.00
Independent Claims		-	=	0	x	$84.00	$0.00
Multiple Dependent Claims	$280	(if applicable)				☐	$0.00
TOTAL OF ABOVE CALCULATIONS							$0.00
Reduction by ½ for Filing by Small Entity. Note 37 CFR §§ 1.9, 1.27, 1.28.						☐	
TOTAL FEES SUBMITTED HEREWITH							**$0.00**

☐ A check in the amount of _____ is enclosed to cover the above fee(s).

☐ Charge Bingham McCutchen's Deposit Account No. **50-2518**, referencing **billing reference no. 7011522001**, in the amount of $_____.

PA:52116631.1/2021039-7011522001/OID-1998-18-01

☒ The Commissioner is authorized to charge Bingham McCutchen's Deposit Account No. **50-2518,** referencing **billing reference no. 7011522001** for any fees required under 37 CFR §§ 1.16, 1.17 and 1.193 that are not covered, in whole or in part, and to credit any overpayments to said Deposit Account **50-2518**.

Respectfully submitted,

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3